

HIFONICS®
C A R A U D I O
POWER FROM THE GODS

ZEUS

SUBWOOFERS

ZX10D2 / ZX10D4
ZX12S4 / ZX12D2 / ZX12D4

H I F N I C S

ZEUS SERIES

CAR AUDIO SUBWOOFERS

Congratulations on your purchase of the new Hifonics ZEUS Series subwoofer system. As Hifonics celebrates 25 years of shaking the mobile audio industry, the ZEUS subwoofer series has been revived. The ZEUS subwoofer series has a reputation in the industry as one of the most efficient and loudest subwoofers in its' price range. The ZEUS subwoofers feature new cosmetics, accurate bass reproduction through a wide range of frequencies, and impressive power handling capabilities.

- Available In DVC 2-Ohm & 4-Ohm As Well As SVC 4-Ohm
- 10" & 12" Round Subwoofers
- Rubber Surround
- Dual Flat Nomex Spider With Woven Tinsel Leads
- Polypropylene Cone
- Nickel Plated Push & Insert Speaker Terminals
- Heat Dispersing Ported Nickel Plated Back Plate
- Ultra Ridged Stamped Steel Basket
- Protective Rubber Magnet Wrap
- Operates In Sealed & Ported Enclosures

As with all high quality car audio products, we recommend professional installation by an authorised Hifonics dealer. Your dealers knowledge and experience can ensure a problem free and cosmetically integrated installation. If you choose to install the subwoofers yourself, please read the entire manual very carefully.

SUBWOOFER INSTALLATION AND WIRING DIRECTIONS

Enclosure Materials

Typically, 5/8" or 3/4" MDF (Medium Density Fiber Board) is best for most applications. 3/4" MDF is recommended.

Enclosure Build Materials

Connecting joints need to be glued and screwed to ensure no air escapes and joints do not separate under high pressure. Mitered and rabbit joints also help to ensure the enclosure joints are secure.

Bracing

Internal bracing is also recommended to prevent flexing and to strengthen the enclosure.

Note: The volume taken up by the bracing should be added to the total enclosure interior volume.

There are two common bracing methods.

1. Corner Bracing: These help prevent the connection joints from separating under heavy vibration and air pressure.

Use 1' x 1" MDF at all interior joints

2. Diagonal Bracing: These internal braces connect the top side to the bottom side as well front side to back side. This prevents the wood from bowing or pushing outwards.

Use 1" x 2" with 1" surface contact that is glued and screwed.

Wiring

Wiring Parallel, Series or Parallel/Series will affect the final impedance at the amp and great care must be taken to ensure the amp is not driven below its intended impedance capabilities.

ZEUS SERIES SUBWOOFERS

<u>ELECTRICAL</u>	<u>ZX10</u>		<u>ZX12</u>			
Wiring	<u>Series</u>	<u>Series</u>		<u>Series</u>	<u>Series</u>	
NomZ	2+2	4+4	4	2+2	4+4	Ohm
Sd	0.033	0.033	0.053	0.053	0.053	sqM
Revc	3.6	6.4	3.6	3.6	6.4	Ohm
BL	16.16	21.03	18.05	16.7	21.15	TxM
Vas	30.5	25	69	69	74	Liter
Cms	195.22	164.53	175.83	172.96	185.49	uM/N
Mms	165.5	165.5	230.5	230.5	218	Grams
Fo	28	30.5	25	25	25	Hz
Qms	2.85	2.95	2.8	3.2	2.55	
Qes	0.405	0.459	0.4	0.467	0.49	
Qts	0.356	0.396	0.35	0.407	0.411	
no	0.159	0.145	0.26	0.223	0.228	%
SPL@1W	84.17	83.88	86.3	85.62	85.72	dB
SPL@2.83V	87.63	84.73	89.76	89.1	86.7	dB
Xmax/Over Hang	15	15	15	15	15	mm
Xmech/Suspension	22.5	22.5	22.5	22.5	22.5	mm
Watt@RMS	450	450	500	500	500	Watts
Watt@PEAK	900	900	1000	1000	1000	Watts

ZEUS SERIES SUBWOOFERS

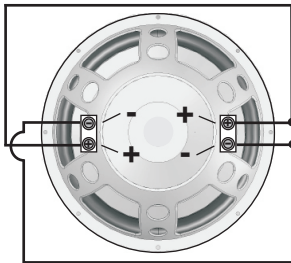
	ZX10	ZX12	
CLOSED BOX DESIGNS (SEALED)			
Standard Tight Bass-Small Box			
Box Volume	0.5	1	Cubic Feet
Qtc	0.635	0.778	
F3	59	45	Hz
VENTED BOX DESIGNS (ROUND PORT)			
Standard Tight Bass-Small Box			
Box Volume	1	1.25	Cubic Feet
Fb	45	40	Hz
Port Size (Inside Diameter)	3	3	Inches
Port Length	8	8.5	Inches
F3	37	37	Hz
Optimal Sound Quality-Flat Response			
Box Volume	1.5	1.75	Cubic Feet
Fb	38	38	Hz
Port Size (Inside Diameter)	4	4	Inches
Port Length	15	12.25	Inches
F3	32	33	Hz
VENTED BOX DESIGNS (SLOT PORT)			
SPL Very Boomie - Loud			
Box Volume	1.8	3	Cubic Feet
Fb	45	45	Hz
Port Size (Height)	10.5	12.5	Inches
Port Size (Width)	2	3	Inches
Port Length	20	19.5	Inches
F3	36	36	Hz
FEATURES ARE SUBJECT TO CHANGE WITHOUT NOTICE			
NOTE: All above box volumes are internal values and already include subwoofer and port displacement.			
The F3 value represents the -3db cut off of the enclosure in Hz.			
Polyfill may be added to sealed enclosures to reach the desired Q-Value.			

Glossary of Terms

Q	The energy losses of relative damping (ratio of stored to dissipated energy or ratio of reactive to resistive energy).
F _s	Free air resonance of driver in Hz.
Q _{ms}	Mechanical Q.
V _{as}	Volume of air equivalent to driver from the rest position.
C _{ms}	Mechanical compliance of a loud speaker piston.
M _{ms}	Moving mass of total loud speaker piston assembly.
X _{max}	The maximum linear excursion of a loud speaker.
S _d	Surface area of the cone.
D _{ia}	The piston diameter of a loud speaker.
Q _{es}	Electrical Q of a system.
R _e	DC resistance.
L _e	VC inductance.
P _e	Maximum input power.
Q _{ts}	Total Q of the system.
Sens	Sensitivity. An efficiency measurement in dB's.
V _c	Volume of a closed or sealed enclosure
V _b	Volume of a vented enclosure.
F _c	The resonant frequency of a closed or sealed system
F _b	The resonant frequency of a vented system
F ₃	The half-power (-3dB) frequency of a loud speaker enclosure
Q _{tc}	The Q of a loud speaker at F _c in a closed box, considering both it's electrical and mechanical resistance.
Q _L	The Q of a vented box, resulting from all box losses.
D _V	Diameter of vent.
L _V	Length of vent.
H	Height.
W	Width.
D	Depth

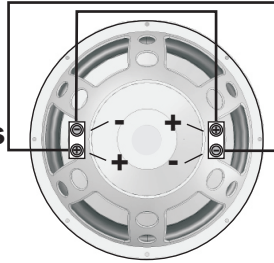
DVC 4-Ohms

Parallel



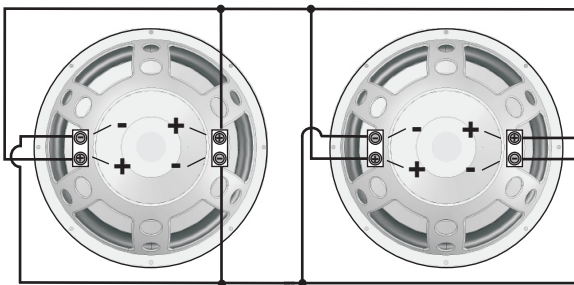
2-Ohms

Series



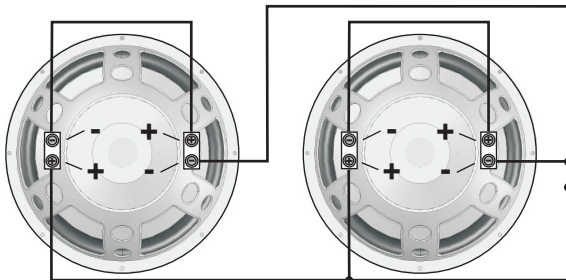
8-Ohms

Parallel Coils / Parallel Subs



1-Ohm

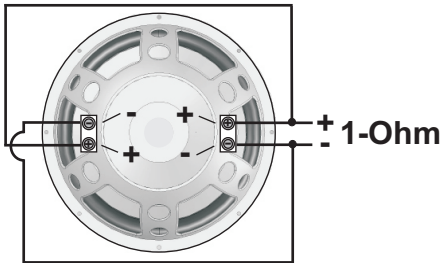
Series Coils / Parallel Subs



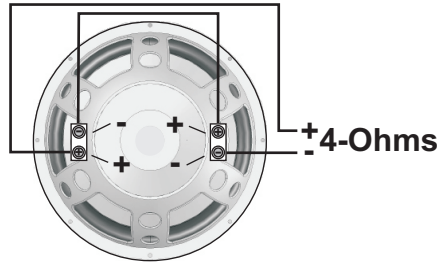
8-Ohms

DVC 2-Ohms

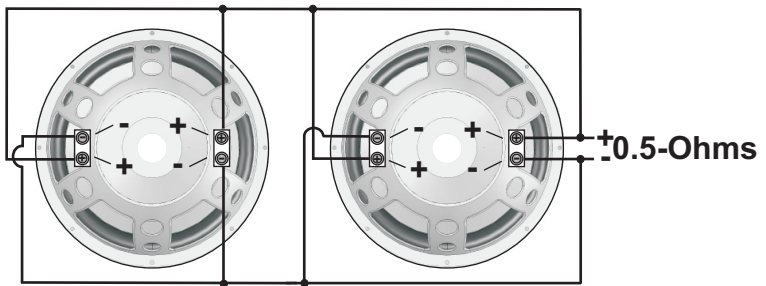
Parallel



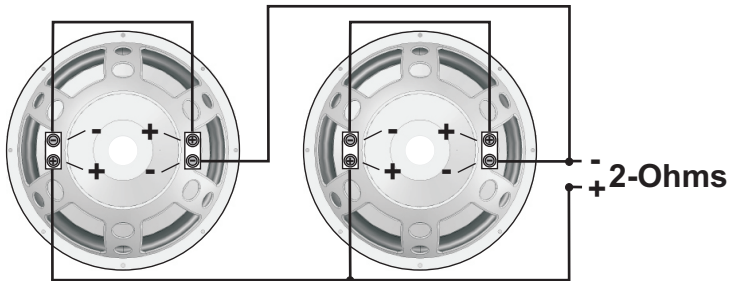
Series



Parallel Coils / Parallel Subs

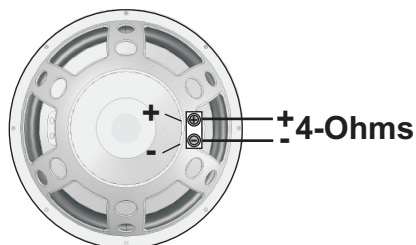


Series Coils / Parallel Subs

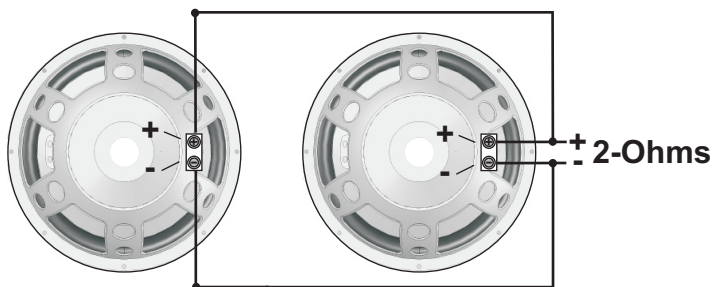


SVC 4-Ohms

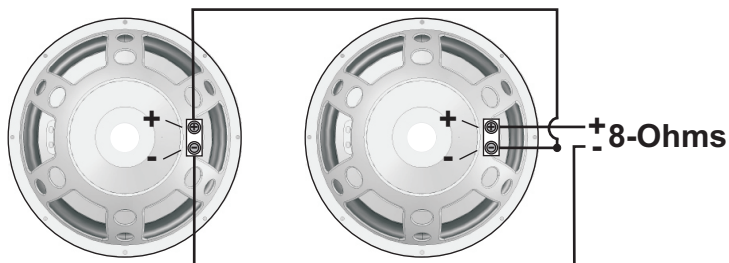
Standard



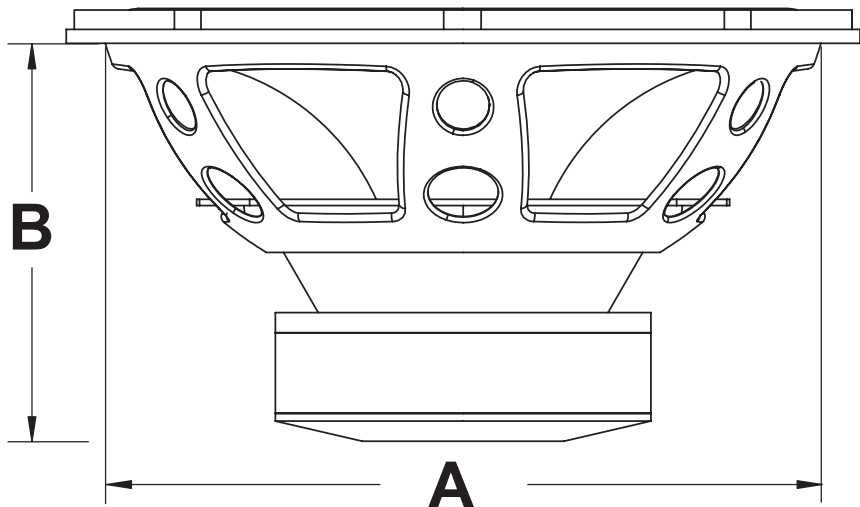
Parallel Subs



Series Subs



Subwoofer Dimensions



Model	A - Cut Out Diameter	B - Mounting Depth
ZX10	9.06" / 230mm	6.06" / 154mm
ZX12	11.18" / 284mm	6.22" / 157.9mm

★Due to the vented backplate, you must allow for an additional 2" behind the subwoofer when designing your speaker enclosure.

Maxxsonics Limited Warranty

As the manufacturer of Maxxsonics, MB Quart, Autotek, Crunch and Hifonics car audio products, Maxxsonics USA Inc. Warrants to the original consumer purchaser the amplifier to be free from defects in material and workmanship for one (1) Year from date of purchase.

All other parts and accessories of the system are warrantied to be free from defects in material and workmanship for one (1) year from date of purchase. Maxxsonics will repair or replace at it's option and free of charge during the warranty period, any system component that proves defective in materials and workmanship under normal installation, use and service provided that the product is returned to the authorized Maxxsonics dealer from where it was purchased. A photo copy of the original receipt must accompany the product being returned.

Valid purchase receipts will contain the name and address of the authorized reseller.

Any damage to the product as a result of misuse, abuse, accident, incorrect wiring, improper installation, alteration of date code or bar code labels, revolution, natural disaster, or any sneaky stuff because someone messed up, repair or alteration out side of our factory or authorized service centers and any thing else you have done that you should not have done is not covered.

This warranty is limited to defective parts and specifically excludes any incidental or consequential damages connected therewith. This warranty is not to be construed as an insurance policy.

Warranty on installation labor, removal, re-installation and freight charges are not the responsibility of Maxxsonics USA Inc.

Warranty products damaged as a result of insufficient or improper packing materials are not covered by this limited warranty and such damaged product will be returned "as is" at the expense of the owner.



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